

WHAT IS CLAIMED IS:

1. A resource management method for managing a resource retained by an image forming apparatus that is capable of processing print data, which is based upon print languages of a plurality of types, using a specified resource, comprising:

a setting step of setting attributes, with regard to the resource, corresponding to each of the plurality of types of print languages processable by the image forming apparatus; and

a storage step of storing the attributes, which have been set at said setting step, in the image forming apparatus in association with actual data of the resource retained by the image forming apparatus.

2. The method according to claim 1, further comprising a download step of downloading actual data of a resource to the image forming apparatus;

wherein said storage step stores attributes regarding the resource in association with the actual data of the resource downloaded at said download step.

3. The method according to claim 1, wherein an attribute indicating whether a resource is utilizable with each print language is included as an attribute corresponding to each of the plurality of types of print languages, and said method further comprises a list display step of reading the attributes that have been stored in association with the resource retained

by the image forming apparatus and displaying attributes regarding a resource utilizable by a specific print language.

4. The method according to claim 2, wherein an
5 attribute indicating whether a resource is utilized as a default with each print language is included as an attribute corresponding to each of the plurality of types of print languages, and said list display step displays attributes, which concern a resource
10 specified as a default in regard to a specific print language, in such a manner that this fact can be recognized.

5. The method according to claim 2, wherein a name of a resource corresponding to each print language is
15 included as an attribute corresponding to each of the plurality of types of print languages, and said list display step displays a resource name, which has been specified with regard to each print language, in such a manner that this fact can be recognized.

20 6. The method according to claim 1, wherein the resource is a font resource used in printing, and/or a form resource for forming an image by being superimposed on print data at the time of printing, and/or a color-profile resource that expresses color
25 space of an input/output device, and/or a look-up-table resource, which is a conversion table for color correction in color processing, and/or a dither-

pattern resource, which is pattern data for deciding expression of color in color processing.

7. A resource management method for managing a resource retained by a device that is capable of processing input data by a plurality of mutually different processors using a resource specified by the input data, comprising:

a setting step of setting attributes, with regard to the resource, corresponding to each of the plurality of mutually different processors implemented in the device; and

a storage step of storing the attributes, which have been set at said setting step, in the device in association with actual data of the resource retained by the device.

8. A computer program product executed by a computer in order to manage a resource retained by an image forming apparatus that is capable of processing print data, which is based upon print languages of a plurality of types, using a specified resource, comprising:

code of a setting step of setting attributes, with regard to the resource, corresponding to each of the plurality of types of print languages processable by the image forming apparatus; and

code of a storage step of storing the attributes, which have been set at said setting step, in the image

forming apparatus in association with actual data of the resource retained by the image forming apparatus.

9. A data processing apparatus for managing a resource retained by an image forming apparatus that
5 is capable of processing print data, which is based upon print languages of a plurality of types, using a specified resource, comprising:

setting means for setting attributes, with regard to the resource, corresponding to each of the
10 plurality of types of print languages processable by the image forming apparatus; and

storage means for storing the attributes, which have been set by said setting means, in the image forming apparatus in association with actual data of
15 the resource retained by the image forming apparatus.

10. The apparatus according to claim 9, further comprising download means for downloading actual data of a resource to the image forming apparatus;

wherein said storage means stores attributes
20 regarding the resource in association with the actual data of the resource downloaded by said download means.

11. The apparatus according to claim 9, wherein an attribute indicating whether a resource is utilizable
25 with each print language is included as an attribute corresponding to each of the plurality of types of print languages, and said apparatus further comprises

list display means for reading the attributes that have been stored in association with the resource retained by the image forming apparatus and displaying attributes regarding a resource utilizable by a
5 specific print language.

12. The apparatus according to claim 9, wherein an attribute indicating whether a resource is utilizable with each print language is included as an attribute corresponding to each of the plurality of types of
10 print languages, and said apparatus further comprises selection means for reading the attributes that have been stored in association with the resource retained by the image forming apparatus and selecting a resource utilizable by a specific print language.

15 13. The apparatus according to claim 12, wherein an attribute indicating whether a resource is utilized as a default with each print language is included as an attribute corresponding to each of the plurality of types of print languages, and said selection means
20 determines attributes concerning a resource specified as a default in regard to a specific print language.

14. The apparatus according to claim 12, wherein a name of a resource corresponding to each print language is included as an attribute corresponding to
25 each of the plurality of types of print languages, and said selection means specifies a resource name made to correspond with regard to a specific print language.

15. The apparatus according to claim 11, wherein an attribute indicating whether a resource is utilized as a default with each print language is included as an attribute corresponding to each of the plurality of
5 types of print languages, and said list display means displays attributes, which concern a resource specified as a default in regard to a specific print language, in such a manner that this fact can be recognized.

10 16. The apparatus according to claim 9, wherein the resource is a font resource used in printing, and/or a form resource for forming an image by being superimposed on print data at the time of printing, and/or a color-profile resource that expresses color
15 space of an input/output device, and/or a look-up-table resource, which is a conversion table for color correction in color processing, and/or a dither-pattern resource, which is pattern data for deciding expression of color in color processing.

20 17. A data processing apparatus for managing a resource retained by a device that is capable of processing input data by a plurality of mutually different processors using a resource specified by the input data, comprising:

25 setting means for setting attributes, with regard to the resource, corresponding to each of the plurality of mutually different processors implemented

in the device; and

storage means for storing the attributes, which have been set at said setting step, in the device in association with actual data of the resource retained

5 by the device.

18. An image forming apparatus that is capable of processing print data, which is based upon print languages of a plurality of types, using a specified resource, wherein actual data of the resource and
10 attributes corresponding to each of the processable plurality of types of print languages are stored in associated form.

19. A data processing apparatus, which communicates with an image processing apparatus that processes
15 image data while utilizing resources retained in a memory, for executing prescribed image processing utilizing resources managed by the memory, comprising:

retention means for retaining resources, which are utilized in image processing, together with
20 information indicating features of the resources on a per-resource basis;

first setting means for setting, with respect to each resource stored in the memory within the image processing apparatus, two or more items of display-
25 name information as information indicating the features of these resources; and

second setting means for setting, with respect to

each resource stored in the memory within the image processing apparatus, display-name information, which indicates names used in display, as information indicating features of these resources, the display-
5 name information being set for every print language received by the image processing apparatus.

20. A data processing apparatus for use with an image processing apparatus in which resources utilized in image processing within the image processing apparatus
10 are retained together with information indicating features of the resources on a per-resource basis, print data or input data based upon print languages of a plurality of types is received, and image data is processed while utilizing resources that are retained
15 within the image processing apparatus from an initial state, or that are downloaded, in accordance with a resource utilization command sent together with the print data or input data, said data processing apparatus comprising:

20 resource download means for downloading resources to said image processing apparatus;

first setting means for setting, with respect to each resource within said image processing apparatus, two or more items of display-name information as
25 information indicating the features of these resources; and

second setting means for setting, with respect to

each resource within said image processing apparatus,
display-name information, which indicates names used
in display, as information indicating features of
these resources, the display-name information being
5 set for every print language received by said image
processing apparatus.

21. The apparatus according to claim 20, wherein
display-name information set by said second setting
means indicates which name to use from among the names
10 set by said first setting means.

22. The apparatus according to claim 20, wherein
display-name information set by said second setting
means indicates that the resource is not to be
displayed.

15 23. The apparatus according to claim 20, wherein the
resource is a font resource used in printing, and/or a
form resource for forming an image by being
superimposed on print data at the time of printing,
and/or a color-profile resource that expresses color
20 space of an input/output device, and/or a look-up-
table resource, which is a conversion table for color
correction in color processing, and/or a dither-
pattern resource, which is pattern data for deciding
expression of color in color processing.

25 24. A data processing apparatus for managing a
resource retained by an image forming apparatus that
is capable of processing print data, which is based

upon print languages of a plurality of types, using a specified resource, comprising:

a setting unit adapted to set attributes, with regard to the resource, corresponding to each of the plurality of types of print languages processable by the image forming apparatus; and

a storage adapted to store the attributes, which have been set at said setting step, in the image forming apparatus in association with actual data of the resource retained by the image forming apparatus.

25. A data processing apparatus for managing a resource retained by a device that is capable of processing input data by a plurality of mutually different processors using a resource specified by the input data, comprising:

a setting unit adapted to set attributes, with regard to the resource, corresponding to each of the plurality of mutually different processors implemented in the device; and

a storage adapted to store the attributes, which have been set at said setting step, in the device in association with actual data of the resource retained by the device.

26. A data processing apparatus, which communicates with an image processing apparatus that processes image data while utilizing resources retained in a memory, for executing prescribed image processing

utilizing resources managed by the memory, comprising:

a retention unit adapted to retain resources,
which are utilized in image processing, together with
information indicating features of the resources on a

5 per-resource basis;

a first setting unit of set, with respect to each
resource stored in the memory within the image
processing apparatus, two or more items of display-
name information as information indicating the

10 features of these resources; and

a second setting unit of set, with respect to
each resource stored in the memory within the image
processing apparatus, display-name information, which
indicates names used in display, as information

15 indicating features of these resources, the display-
name information being set for every print language
received by the image processing apparatus.

27. A data processing apparatus for use with an image
processing apparatus in which resources utilized in
20 image processing within the image processing apparatus
are retained together with information indicating
features of the resources on a per-resource basis,
print data or input data based upon print languages of
a plurality of types is received, and image data is
25 processed while utilizing resources that are retained
within the image processing apparatus from an initial
state, or that are downloaded, in accordance with a

resource utilization command sent together with the
print data or input data, said data processing
apparatus comprising:

- a resource downloader adapted to download
- 5 resources to said image processing apparatus;
- a first setting unit of set, with respect to each
resource within said image processing apparatus, two
or more items of display-name information as
information indicating the features of these
- 10 resources; and

- a second setting unit of set, with respect to
each resource within said image processing apparatus,
display-name information, which indicates names used
in display, as information indicating features of
- 15 these resources, the display-name information being
set for every print language received by said image
processing apparatus.